SIGARMS Training

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SIGARMS, INC. Corporate Park Exeter, NH 03833

P220 Combat Pistol

Armorers Manual

P220

ARMORERS MANUAL

The SIGARMS Armorers Manual is intended as a Reference Source to be used in conjunction with the formal training received from the SIGARMS ACADEMY Armorers School.

SIG-Sauer Pistols are accompanied by an Owners Manual which explains and illustrates user responsibilities and safety precautions. It is recommended that this information be read and adhered to at all times. Information provided in either manual may change without notification.

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1.1 General

The SIG-SAUER P220 combat pistol has been developed to meet the requirements of the world's Military and Law Enforcement Agencies. It is manufactured by state of the art production processes to provide the ultimate in safety, reliability and quality. The P220 is an excellent close combat weapon that can be placed into action rapidly through the use of multiple passive safeties, a double-action trigger mechanism, and high visibility, adjustable sights.

This mechanically locked, short recoil operated, semiautomatic pistol is self-loading and will continue to fire with each pull of the trigger until the slide is locked open by the empty magazine. After firing, the pistol may be easily disassembled for maintenance without the use of tools and with very little effort.

1.2 Technical Specifications of the SIG-Sauer P220

Caliber:	.45 ACP, .38 Super
System of Operation:	Semiautomatic, short recoil operated
Safety System:	1) Patented automatic firing pin lock 2) Decocking lever 3) Hammer safety intercept notch

Dimensions and Weights	.45 ACP	.38 SUPER
Length, overall	7.79 in.	7.79 in.
Height, overall	5.63 in.	5.63 in.
Width, overall	1.37 in.	1.37 in.
Barrel Length	4.41 in.	4.41 in.
Rifling Lead	15.74 in.	9.84 in.
Number of Rifling Grooves	6	6
Sight Base	6.29 in.	6.29 in.
Weight, excluding magazine	25.7 oz.	26.5 oz.
Weight of empty magazine	2.4 oz.	2.9 oz.
Trigger Pull Weight (lbs)	DA 12.12/SA 4.4	DA 12.12/SA 4.4
Magazine Capacity - Rounds	7	9

NOTE: *Above subject to change without notice. Parts are interchangeable. Broken parts must be replaced, do not repair broken or damaged parts.*

The SIG-SAUER P220 Pistol With Magazine Inserted

3.	Decocking lever	33.	Slide
10.	Hammer	42.	Rear sight
20.	Trigger	50.	Frame
22.	Slide catch lever	54.	Magazine catch
26.	Take-down lever	59.	Magazine

NOTE: *The reference numbers identifying individual parts throughout this manual are identical with the numbers in the parts list section.*

2.1 Weapon

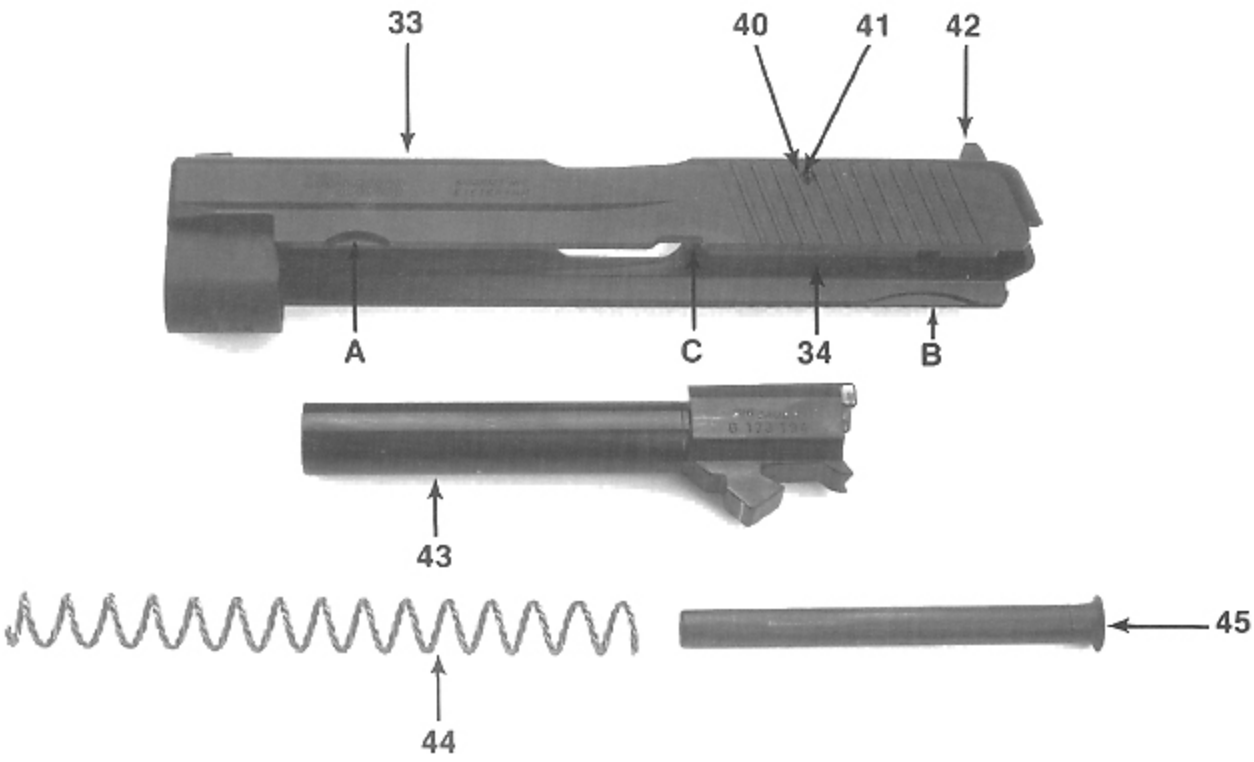
2.1.1 General

The Three Main Components of the SIG-SAUER P220 Pistol

A. The Slide
B. The Frame
C. The Magazine

2.1 Weapon (cont'd)

2.1.2 The Slide

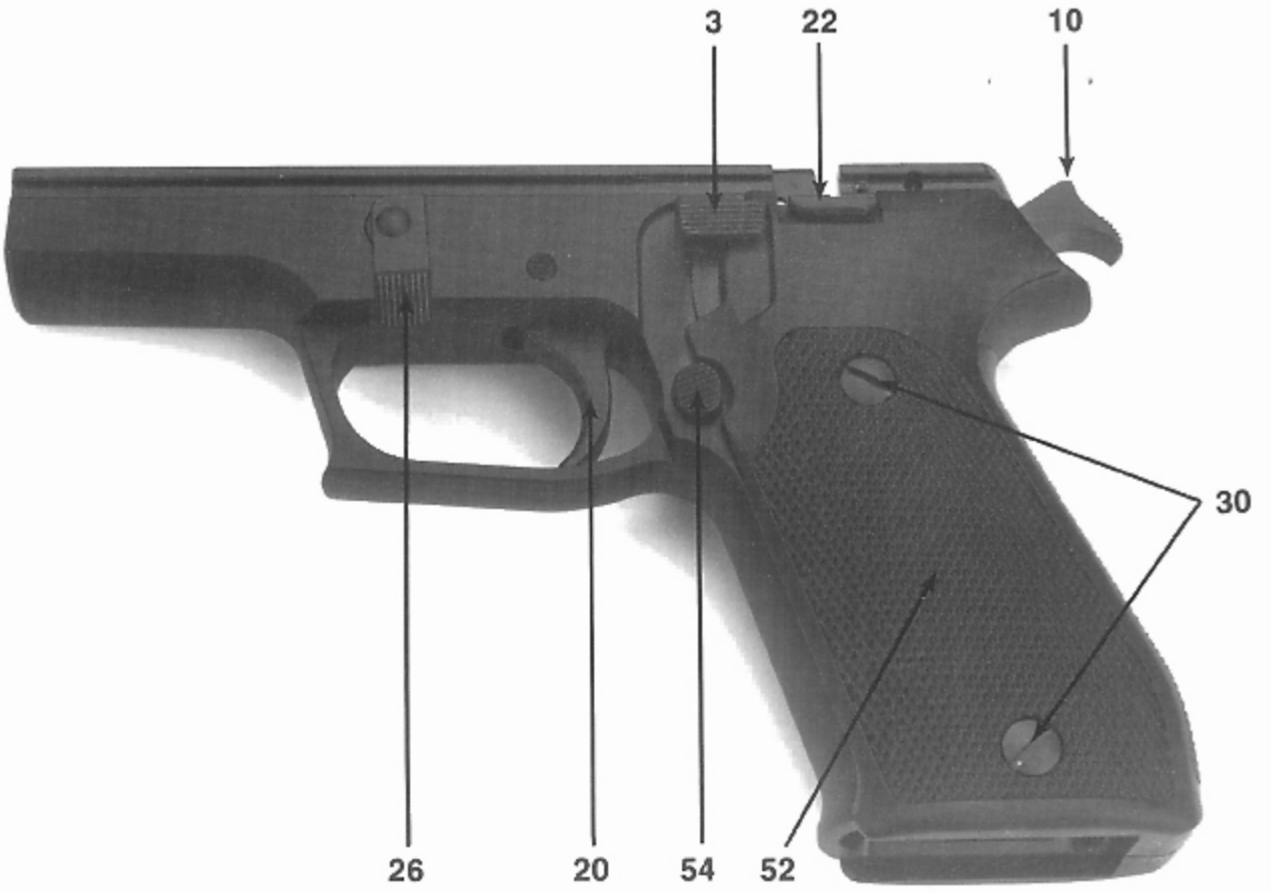


The Slide

33. Slide
34. Breechblock
40. Outer pin H.D.
41. Inner pin H.D.
42. Rear sight
43. Barrel
44. Recoil spring
45. Recoil spring guide
A. Takedown lever recess
B. Disconnector recess
C. Slide arresting notch

2.1 Weapon (cont'd)

2.1.3 The Frame

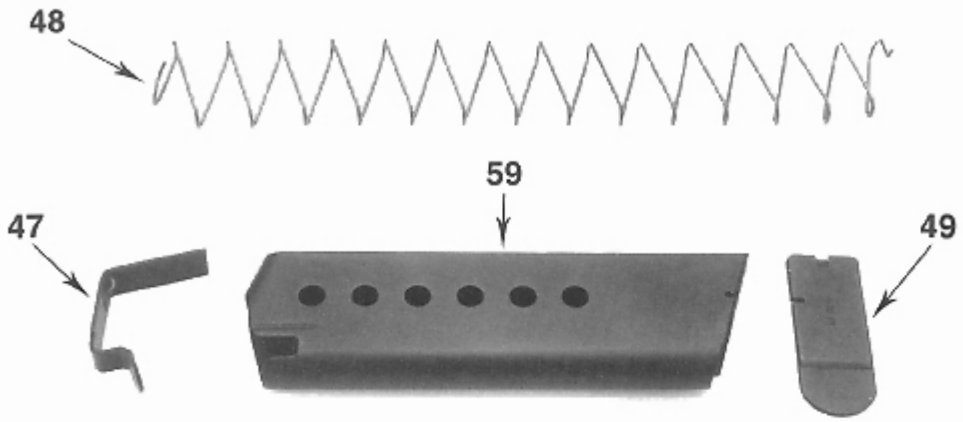


The Frame

3.	Decocking lever
10.	Hammer
20.	Trigger
22.	Slide catch lever
26.	Takedown lever
30.	Grip plate screw
52.	Left grip plate
54.	Magazine catch

2.1 Weapon (cont'd)

2.1.4 The Magazine



The Magazine

47. Magazine follower
48. Magazine spring
49. Magazine floorplate
59. Magazine tube

NOTES

NOTE: *The operations described hereafter (loading, reloading, and unloading) are always to be carried out with the trigger finger off of the trigger and the muzzle pointing in a safe direction. In addition, descriptions of the pistol will be made as if the operator were pointing it directly away from him, as in firing.*

3.1 Loading - Sequence of Operations

1. Trigger finger off of the trigger and muzzle pointing in a safe direction.
2. Insert a full magazine and ensure that it has engaged the magazine catch **(check).**
3. Pull the slide fully to the rear and release it to chamber the first round from the magazine.
4. You may either fire the pistol or thumb down the decocking lever (to safely lower the hammer) and place it in the holster.

3.2 Reloading - Sequence of Operations

1. Trigger finger off of the trigger and muzzle pointing in a safe direction.
2. Depress the magazine catch to remove the empty magazine.
3. Insert a fresh magazine and ensure that it has engaged the magazine catch **(check).**
4. If the slide is locked back, either pull it to the rear slightly and release it or thumb down the slide catch lever.
5. You may either fire the pistol or thumb down the decocking lever (to safely lower the hammer) and place in the holster.

3.3 Unloading - Sequence of Operations

1. Trigger finger off of the trigger and muzzle pointing in a safe direction.
2. Remove the magazine.
3. Pull the slide to the rear to eject the chambered round, inspect both the chamber and the magazine well to make sure the pistol is unloaded.
   Check a second time.
4. Let the slide go forward and thumb down the decocking lever.

3.4 Firing the Pistol - Sequence of Operations

1. Remove the pistol from its holster and assume a shooting position.
2. Pull the trigger to fire (no external safety lever has to be operated).
3. When through firing, remove the trigger finger from the trigger, thumb down the decocking lever, reload, unload, or place the pistol back in its holster.

3.5 Cycle of Operation

In order to understand the functioning of a semiautomatic pistol, the cycle of operation must be understood.

Feeding: Placing the round in the path of the slide.

Chambering: Moving the round from the magazine to the chamber.

Locking: Sealing the round in the chamber and locking the breech end of the barrel into the slide.

Firing: Ignition of the primer and firing the round.

Unlocking: Unsealing the breech end of the barrel and unlocking the barrel from the slide.

Extracting: "Pulling" the spent cartridge from the chamber.

Ejecting: "Pushing" the spent cartridge out of the ejection port.

Cocking: Returning the firing mechanism to the cocked position, ready to fire another round.

4.1 Disassembly - Sequence of Operations

1. Unload and check the chamber both visually and physically. **Check again!**
2. Lock the slide to the rear by inserting an **EMPTY** magazine and pulling the slide to the rear until slide is locked back by the slide catch lever, or simply pull the slide to the rear and push the slide catch lever up into the arresting notch in the slide.
3. Thumb down the take-down lever to the vertical position.

4. Remove the empty magazine.

4.1 Disassembly (cont'd)

5. Pull the slide slightly to the rear to disengage the slide catch lever, then move the slide forward and off the frame, allowing the recoil spring to gradually release tension.

6. Remove the recoil spring and guide by grasping the end of the guide and pulling it away from the barrel lug, gradually releasing the remaining recoil spring tension.

7. Remove the barrel by gripping the large lug on the bottom of the barrel and lifting it up and away from the slide.

4.2 Assembly - Sequence of Operations

1. Hold the slide upside down and insert the barrel, muzzle end first. Then install the recoil spring and guide (the flared end of the guide is placed in the recess on the front of the large lug of the barrel).

CAUTION: *Ensure the barrel and slide are in the locked position during installation of the slide onto the frame.*

2. Insert an empty magazine into the frame.
3. Install the slide onto the frame and pull it to the rear until the slide catch locks it back (this will occur automatically with magazine installed).
4. Thumb up the take-down lever and remove magazine.
5. Depress the slide catch lever to release the slide.
6. Thumb down the decocking lever to lower the hammer.
7. **CARRY OUT FUNCTION CHECKS** - See Section 6.0 - **WEAPON INSPECTION**

NOTES:

5.1 Disassembling the Magazine - Sequence of Operations

1. Invert the magazine.
2. Depress the magazine spring with a suitable tool through the opening in the side of the floorplate.
3. Slide the floorplate off the magazine tube, ensuring the magazine spring tension is gradually released.

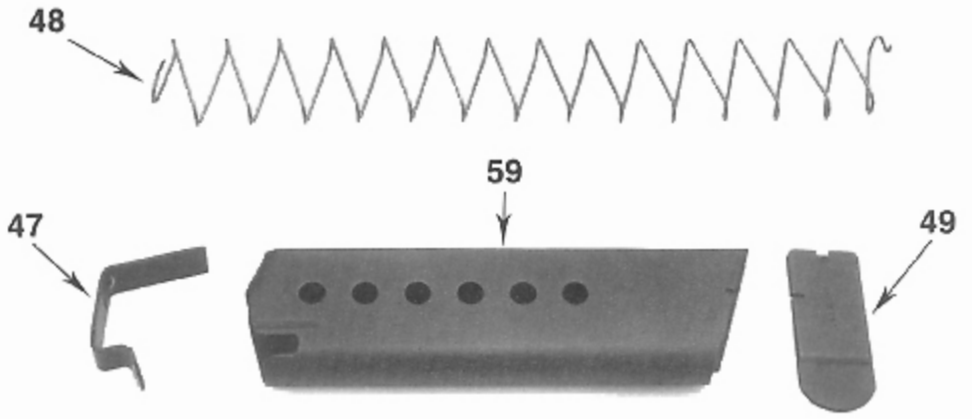
NOTE: *The magazine spring is under great pressure - keep work operation away from the face.*

4. Remove the magazine spring and magazine follower from the magazine tube.

5.2 Assembling the Magazine - Sequence of Operations

1. Place the magazine follower on the magazine spring (raised end of spring under the front of the magazine follower).
2. Hold magazine tube vertically and insert the magazine follower and magazine spring.
3. Invert the magazine, compress the magazine spring fully into the magazine tube and install the floorplate.

NOTE: *Be sure that the magazine spring locks into the floorplate opening, securing it to the magazine tube.*



Magazine Disassembled

47. Magazine follower
48. Magazine spring
49. Magazine floorplate
59. Magazine tube

6.1 General

The armorer should carry out the following inspections:

1. Function inspection
2. Parts inspection

6.2 Function Inspection

A function check is to be carried out on the assembled weapon:

1. To determine causes of malfunction
2. After repair work
3. Following cleaning and during weapon inspections, as well as after parts inspection and lubrication

6.2.1 Unload and Make the Weapon Safe

Remove magazine, pull slide to the rear to eject the chambered round, inspect both the chamber and magazine well to be sure the pistol is unloaded. **Check a second time.** (See Section 3.3 - **Unloading - Sequence of Operations**).

6.2.2 Trigger and Hammer Mechanisms

A. Decocking lever

1. Clear the pistol.
2. Cock the hammer.
3. Place moderate pressure on the back of the hammer to ensure positive sear engagement with the hammer.
4. Thumb down the decocking lever and check that the trigger returns to the double action position.
5. Check that the hammer has come to rest in the safety intercept notch before reaching the extreme dropped position.

B. Double action function

1. With hammer decocked, pull the trigger.
2. Check that the hammer moves to the rear and drops forcefully, striking the firing pin.

6.2 Function Inspection (cont'd)

6.2.2 Trigger and Hammer Mechanisms (cont'd)

C. Interruption of trigger function or disconnector operation

1. With hammer forward and the trigger retained to the rear, pull the slide to the rear and release it.

2. Check that the hammer is retained in the cocked position (trigger remains pulled).

D Single-action function

1. Release the trigger.

2. Check that the trigger bar engages the safety lever once more and, that upon pulling the trigger again, the hammer is released.

6.2.3 Recoil Spring

Check the force of the recoil spring and smooth cycling of the slide. Carry out the loading movement and check that the slide/barrel group springs forward smartly and locks. Repeat once.

6.2.4 Magazine

1. Check the condition of the magazine tube, the lips and the floorplate.

2. Check for the correct interlocking of the floorplate on the magazine tube.

3. Check for smooth movement and springing of the magazine follower.

4. Check for ease of insertion of the magazine into the frame and positive locking.

5. Check for free in and out movement of the magazine catch.

6. With an empty magazine in place, pull the slide to the rear and release it. The slide must be arrested in the rear position by the slide catch lever.

6.2 Function Inspection (cont'd)

6.2.5 Slide Catch Lever

1. Thumb down the slide catch lever and check that the slide is released and forcefully springs forward.

2. Thumb down the decocking lever.

6.3 Parts Inspection

6.3.1 General

This inspection includes a close check of individual parts for damage such as cracks, unacceptable deformation, smoothness and condition of all sliding and bearing surfaces, as well as function and condition of all springs. This inspection should be carried out as a normal part of preventive maintenance each time the pistol is disassembled.

The barrel, slide and frame should be inspected to ensure serial number agreement.

Parts inspection is to be performed with the weapon unloaded, disassembled and cleaned.

6.3.2 Areas of Inspection

A. Barrel

1. Bore and chamber
2. Locking surfaces
3. Feed ramp
4. Muzzle

B. Recoil spring and recoil spring guide

6.3 Parts Inspection (cont'd)

6.3.2 Areas of Inspection (cont'd)

C. The Slide

1. Ejection port, locking surfaces
2. Extractor
3. Firing pin and firing pin spring
4. Projection of the firing pin through the breech face
5. Arresting notch for the slide catch lever
6. Pins H.D. of the breechblock
7. Safety lock and safety lock spring
8. Front and rear sights, contrast markings, tightness of fit
9. Finish

D. The Frame

1. Take-down lever
2. Locking insert
3. Trigger, trigger pivot pin, trigger bar, and trigger bar spring
4. Decocking lever, bearing and spring
5. Slide catch lever and slide catch lever spring
6. Ejector (integral with the slide catch lever)
7. Sear, sear spring and safety lever
8. Hammer, hammer stop
9. Hammer strut assembly

6.3 Parts Inspection (cont'd)

6.3.2 Areas of Inspection (cont'd)

D. The Frame (cont'd)

10. Magazine catch
11. Magazine catch support plate
12. Grip plates, grip plate screws, and washers
13. Finish

E. The Magazine

1. Magazine tube and lips
2. Magazine floorplate
3. Magazine spring
4. Magazine follower

7.1 Cleaning the Pistol

7.1.1 General

Pistol must be stored in a dry location. Humidity and rapid temperature changes are detrimental and encourage corrosion. If a pistol is not to be used for some time, lubricate it well, particularly the bore of the barrel and the exterior surfaces. Clean the pistol immediately after each use.

7.1.2 Cleaning Procedures

1. Disassemble the pistol after making sure it is UNLOADED.

2. Clean all areas with a cloth treated with a small amount of cleaning solvent.

CAUTION: *Some cleaning solvents and treated cloths may be detrimental to the finish of your weapon. Please read the manufacturers' warning labels before using.*

3. Cleaning the barrel

CAUTION: *Use of a steel brush may be harmful to the smooth barrel surface.*

   A. To remove all traces of powder residue and bullet fouling from the barrel, push a wire brush treated with cleaning solvent through the bore at least ten times, from the chamber end.

   B. Dry the barrel using a jag or slotted tip cleaning rod and cloth patches.

   C. Continue until the patches inserted into the bore return clean.

4. Reassemble the pistol.

5. Carry out function checks, see (6.2).

6. See lubrication specification (7.1.3).

7.1 Cleaning The Pistol (cont'd)

7.1.3 Lubrication Specifications

1. **DO NOT FIRE THE PISTOL WITHOUT LUBRICATION.** For user level lubrication, place several small drops of oil on both the left and right sides of the frame rails. Lightly lubricate the interior and exterior of the barrel with emphasis on the locking surfaces; the muzzle top and bottom, barrel hood where it locks into the ejection port, and the locking lugs where they engage the locking insert with a light film of oil. Lightly lubricate the rib on the bottom of the breechblock along its full length. Place several drops of oil on the recoil spring and recoil spring guide. If the weapon has been further disassembled, lightly lubricate all moving parts before reassembly. Assemble the pistol and cycle the slide back and forth several times to disburse the lubricant evenly. The blued surfaces of the slide should be lightly treated with a lubricant/preservative to maintain the integrity of the finish. Wipe off any excess lubrication on the pistol's exterior.

2. Do not over-lubricate the weapon.

8.1 Function of the Trigger Assembly

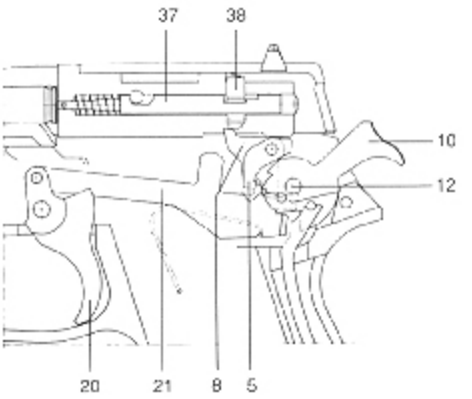
8.1.1 Double Action/Single Action Function

With the weapon loaded and the hammer decocked, the first shot can be fired double-action by pulling the trigger.

By pulling the trigger, the trigger bar is drawn forward and moves the hammer rearward. The trigger bar also operates the safety lever to lift the safety lock. The safety lever draws the sear out of register with the hammer while the safety lock is raised and frees the firing pin. Continued movement of the trigger causes the trigger bar to release the hammer which strikes the firing pin and fires the cartridge.

With the weapon loaded and the hammer cocked, the first shot can be fired single-action by pulling the trigger.

When pulling the trigger in the single-action mode, the trigger bar is drawn forward, pivoting the safety lever which lifts the safety lock to free the firing pin, and moves the sear to release the hammer.



Function of the Trigger Assembly

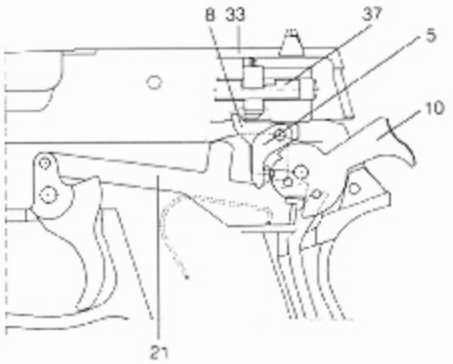
5.	Sear	20.	Trigger
8.	Safety lever	21.	Trigger bar
10.	Hammer	37.	Firing pin
12.	Hammer pivot pin	38.	Safety lock

8.1 Function of the Trigger Assembly (cont'd)

8.1.2 Disconnector Operation (Automatic Interruption of Trigger Function)

1. Upon firing - the blowback reaction thrusts the slide and barrel rearward. The slide disconnects the trigger bar from the safety lever, which allows the firing pin and firing pin safety lock to reset to the locked position, as well as releasing the sear. The sear, under pressure of the sear spring, returns to its initial position and arrests the hammer as the slide goes forward. In order to fire the next shot, the trigger must be released to allow the trigger bar and safety lever to engage.

2. Incomplete locking - if the slide does not fully return into battery due to a weapon, magazine or ammunition malfunction, the connection between the firing pin safety lock and safety lever is not made. Therefore, the safety lock remains engaged, blocking the firing pin. In this disconnected state, the slide also cams down the trigger bar and effectively interrupts subsequent trigger functions.



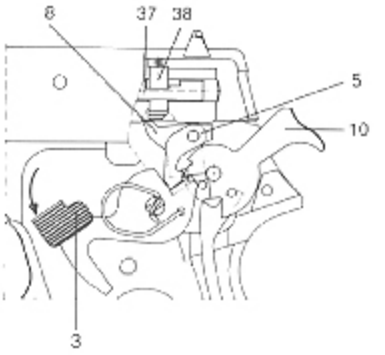
Trigger Assembly, Disconnector Operated

5.	Sear	21.	Trigger bar
8.	Safety lever	33.	Slide
10.	Hammer	37.	Firing pin

8.1 Function of the Trigger Assembly (cont'd)

8.1.3 Decocking Lever and Safety Intercept Notch

The decocking lever allows the cocked hammer to be safely lowered into the safety intercept notch. In this condition, the weapon can be carried with a cartridge in the chamber, ready for immediate use. The safety intercept notch is the rest position of the hammer in the double-action position. It also becomes effective if the hammer should slip while someone tries to thumbcock or drops the weapon. Thumbing down the decocking lever moves the sear out of register with the hammer's single action notch. The hammer then drops forward, and the decocking lever returns to its original position. The hammer is arrested by the sear engaging in the safety intercept notch. During this operation, the safety lever remains in its rest position and does not lift the safety lock. Hence, during and after decocking, the firing pin remains constantly locked. This ensures that decocking the weapon as instructed cannot cause an inadvertent discharge of a cartridge.



Function of the Decocking Lever and Safety Intercept Notch

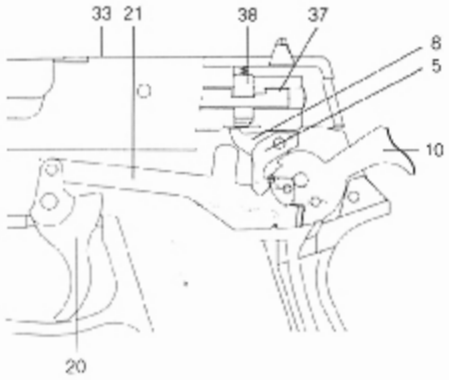
3.	Decocking lever	10.	Hammer
5.	Sear	37.	Firing pin
8.	Safety lever	38.	Safety lock

8.1 Function of the Trigger Assembly (cont'd)

8.1.4 Firing Pin Safety Lock

In order to achieve optimum safety, the firing pin is locked in the slide by the safety lock. When the trigger is pulled, the trigger bar pivots the safety lever to raise the safety lock (thus freeing the firing pin) immediately prior to releasing the hammer.

When pulling the trigger in the single-action mode, the trigger bar is drawn forward, pivoting the safety lever which lifts the safety lock to free the firing pin, and moves the sear to release the hammer. After each shot, the firing pin spring retracts the firing pin, allowing engagement of the safety lock during each cycle of operation. The combination of the automatically locked firing pin and the positive return of the hammer into the safety intercept notch effectively prevents inadvertent firing of the pistol whether cocked or decocked.



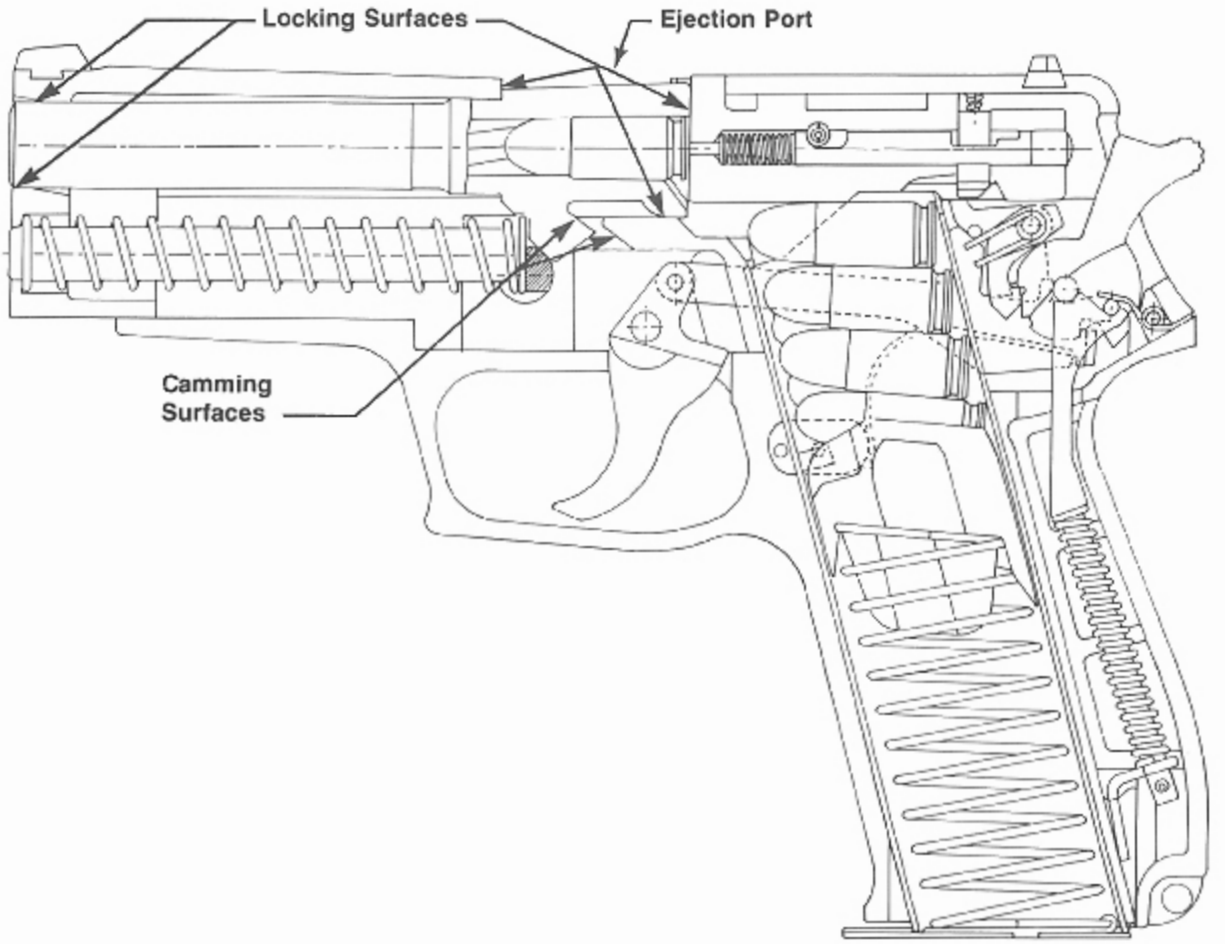
Function of the Firing Pin Safety Lock

5.	Sear	21.	Trigger bar
8.	Safety lever	33.	Slide
10.	Hammer	37.	Firing pin
20.	Trigger	38.	Safety lock

8.2 Locking and Unlocking

At the instant of firing, the weapon is locked: the barrel is seated on the upper step of the locking insert, and is locked into the slide. The blowback reaction thrusts the barrel/slide group rearward against the recoil spring. After recoiling about 1/8", the barrel is cammed down and arrested by the locking insert in the frame. The slide continues rearward, extracting and ejecting the fired cartridge case while compressing the recoil spring.

The compressed recoil spring thrusts the slide forward, stripping a round from the magazine and chambering it on the way to locking into battery. The barrel and slide achieve lock-up 1/8" before reaching battery.



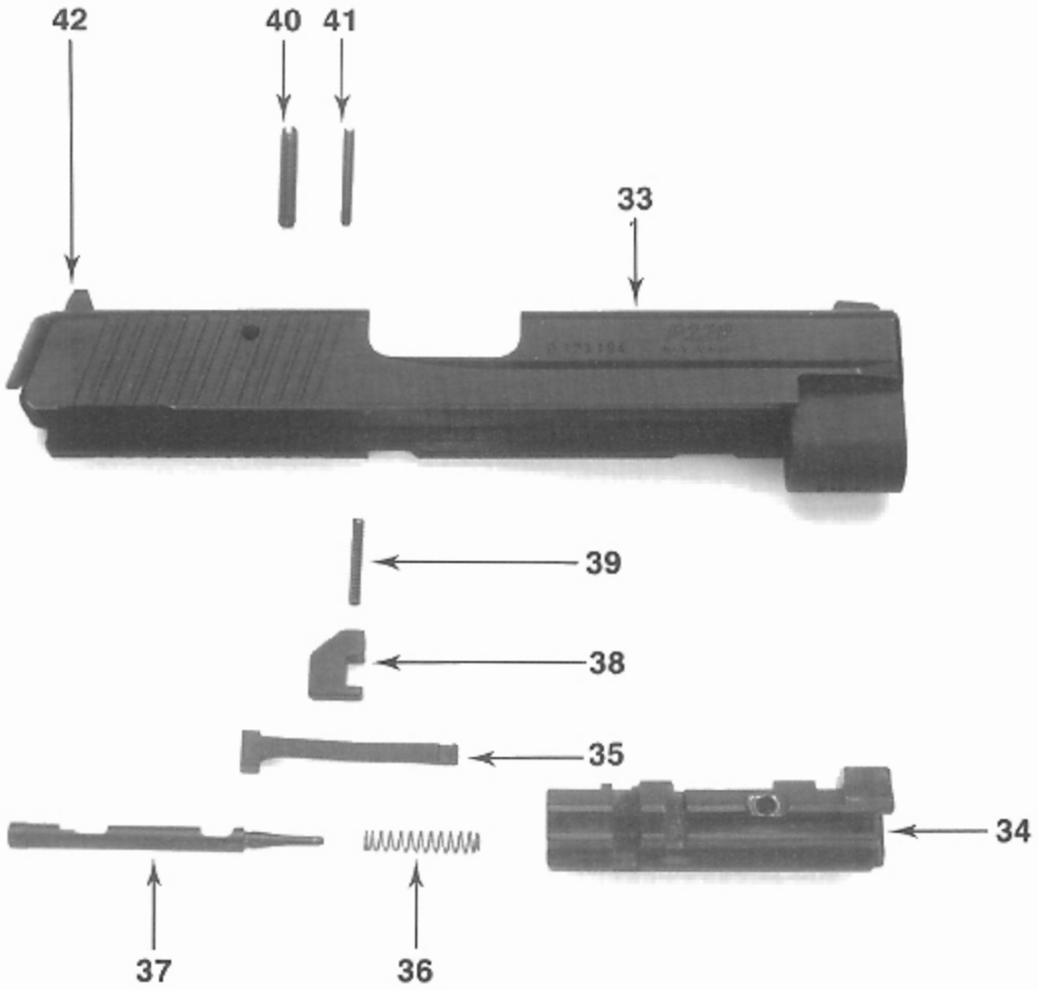
Locking and Camming Surfaces

8.3 Arresting Mechanism (Slide Catch Lever)

After firing the last round, the slide is locked to the rear, in an open position.

The follower of the empty magazine raises the slide catch lever which engages the arresting notch of the slide, and locks it to the rear (in an open position). When the slide catch lever is depressed, the slide is released and springs forward into battery.

NOTES



Slide with Breechblock Removed and Disassembled

33. Slide
34. Breechblock
35. Extractor
36. Firing pin spring
37. Firing pin
38. Firing pin safety lock
39. Firing pin safety lock spring
40. Outer pin H.D.
41. Inner pin H.D.
42. Rear sight

9.1 Removal and Disassembly of the Breechblock

Sequence of Operations

1. Place the slide on a suitable surface.
2. Knock out the inner and outer pins H.D. with a 1/8" roll pin punch.

NOTE: *The inner and outer pins H.D. are not reusable and must be replaced once removed from the slide*

3. Remove the breechblock from the slide.
4. Press the firing pin forward and extract the firing pin safety lock and firing pin safety lock spring from the side of the breech block.
5. Remove the firing pin safety lock spring from the firing pin safety lock.
6. Remove the firing pin and firing pin spring from the breechblock.
7. Loosen the extractor at its rear by means of a 1/8" screwdriver; and, while guiding the claw, remove it from the breechblock.
8. By simultaneous turning and pulling in a clockwise direction, remove the firing pin spring from the firing pin. (**NOTE:** grip tightly where the firing pin spring attaches to the firing pin.)

9.2 Assembly and Installation of the Breechblock

Sequence of Operations

1. With narrow end leading, push the firing pin spring onto the firing pin.
2. Insert the extractor parallel from the side until the rear rectangular end is properly seated.
3. Insert the firing pin into the breechblock bore, with the cut-outs pointing up, towards the top of the breechblock.
4. Push the firing pin forward, insert the firing pin safety lock from the side and seat it, locking the firing pin into the breech block.
5. Place the firing pin safety lock spring in the safety lock.

9.2 Assembly and Installation of the Breechblock (cont'd)

Sequence of Operations (cont'd)

6. Start the outer pin H.D. (with the slot at 12 o'clock), into the slide, so that it is flush with the inside of the slide.

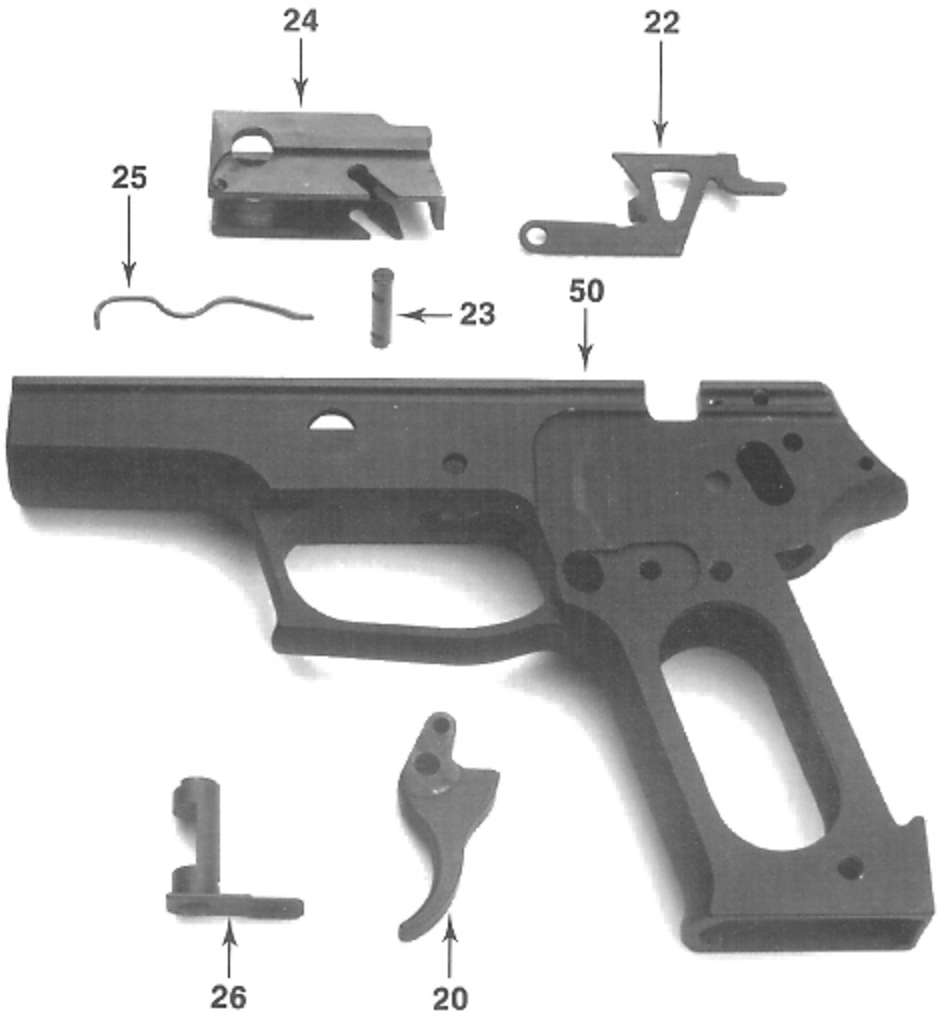
7. While holding the breechblock by its under rib, insert it straight into the slide, ensuring that it is fully seated.

8. With the thumb and index finger holding the breechblock in place, drive in the outer pin H.D. until it enters the first half of the breechblock. Depress the firing pin slightly to allow the outer pin H.D. to pass, and retain it. At this point, start the inner pin H.D. with its slot positioned opposite that of the outer pin H.D. and drive it flush. Then continue installation of the inner and outer pins H.D. until they are centered in the slide.

NOTE: *The slot of the outer pin H.D. should point upward at 12 o' clock and the slot of the inner pin H.D. should point down at 6 o' clock.*

9. Check to ensure that the firing pin and the firing pin safety lock are functioning safely and smoothly.

NOTES



Locking Insert with Slide Catch Lever Spring and Take-down Lever

20. Trigger
22. Slide catch lever
23. Trigger pivot pin
24. Locking insert
25. Slide catch lever spring
26. Take-down lever
50. Frame

10.1 Locking Insert

10.1.1 Removal

Sequence of Operations:

1. Remove the slide from the frame.
2. Decock the hammer using the decocking lever.
3. Rotate the take-down lever upwards to the vertical position. While turning and pulling simultaneously, push the take-down lever from the opposite side of the frame and extract it.
4. Push the locking insert and slide catch lever spring forward, removing them from the frame.
5. Remove the slide catch lever spring from the locking insert.

10.1.2 Installation

Sequence of Operations:

1. Insert the slide catch lever spring, with its hook in the hole of the locking insert.
2. Position the trigger pivot pin so that the notches are down and the serrations at the pin's end are horizontal.
3. Insert the locking insert into the frame from the front until the holes for the take-down lever are aligned.
4. Insert the take-down lever vertically, fully seating it by turning and simultaneously pushing inward.

NOTE: *Trigger and hammer must be forward in the double action position before removing or installing the locking insert.*

10.2 Grip Plates, Left and Right

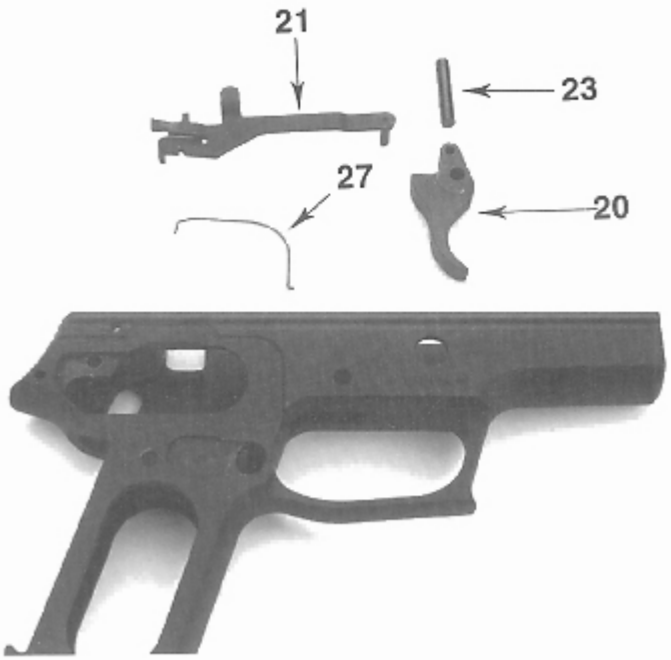
10.2.1 Removal

Sequence of Operations:

1. Using a proper fitting screwdriver, remove the grip plate screws.
2. Carefully remove the right grip plate and the left grip plate.
3. Take note of the metal washers in the grip plate. Do not reinstall grip plates without ensuring that the washers are in place.

10.2.2 Installation

To install, reverse the order used for removal.



Trigger Assembly

20. Trigger
21. Trigger bar
23. Trigger pivot pin
27. Trigger bar spring

10.3 Trigger Assembly

10.3.1 Disassemby

Sequence of Operations:

1. Remove the takedown lever.
2. Remove the locking insert.
3. Remove the right grip plate and the left grip plate.
4. Unhook the trigger bar spring and remove it.
5. Push out the trigger pivot pin from either side.
6. Remove the slide catch lever by lifting it up and out of the frame.

NOTE: *The ejector is an integral part of the slide catch lever.*

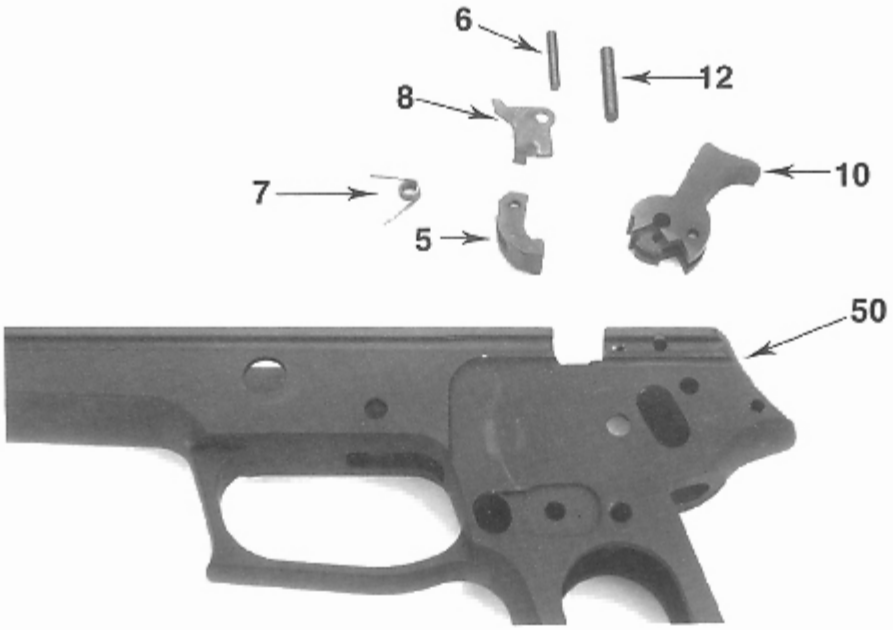
7. Remove the trigger and trigger bar from the frame, diagonally to the front and upward.
8. Disconnect the trigger bar from the trigger.

10.3.2 Assembly

Sequence of Operations:

1. Connect the trigger bar and the trigger, and place them into the frame.
2. Insert the trigger pivot pin from the right, notches down and the serations at the end of the pin left and horizontal.
3. Insert the slide catch lever, centering it on the trigger pivot pin.
4. Reinstall the trigger bar spring, making sure that it is properly positioned on the trigger bar.
5. Install the right grip plate and the left grip plate.
6. Install the locking insert and take-down lever.

10.4 Hammer Assembly



Hammer Assembly

5.	Sear	8.	Safety lever
6.	Sear pin	10.	Hammer
7.	Sear spring	12.	Hammer pivot pin

10.4.1 Disassembly

Sequence of Operations:

1. Remove the take-down lever, locking insert, right grip plate, left grip plate, and trigger assembly.
2. Compress the main spring seat upwards until it is free from its mounting.
3. Remove the main spring seat, main spring and hammer strut (Hammer Strut Assembly) from the frame.
4. Relax the sear spring.

10.4 Hammer Assembly (cont'd)

10.4.1 Disassembly (cont'd)

5. Push out the sear pin.
6. Remove the safety lever, sear and sear spring.
7. Push out the hammer pivot pin.
8. Remove the hammer.

10.4.2 Assembly

Sequence of Operations:

1. Install the hammer and hammer pivot pin.
2. Insert the hammer strut assembly through its opening in the frame.
3. Position the hammer strut into the hammer and mount the main spring seat to the frame.
4. Insert the sear pin into the frame from the right.
5. Install the safety lever on sear pin.
6. Fit the sear in the frame, maintain its position with the sear pin.
7. Position the sear spring in the sear, center the sear pin in the frame.
8. Tension the sear spring beneath the sear spring pin H.D.
9. Reinstall the trigger assembly, locking insert, take-down lever and grip plates.

10.5 Hammer Stop Assembly

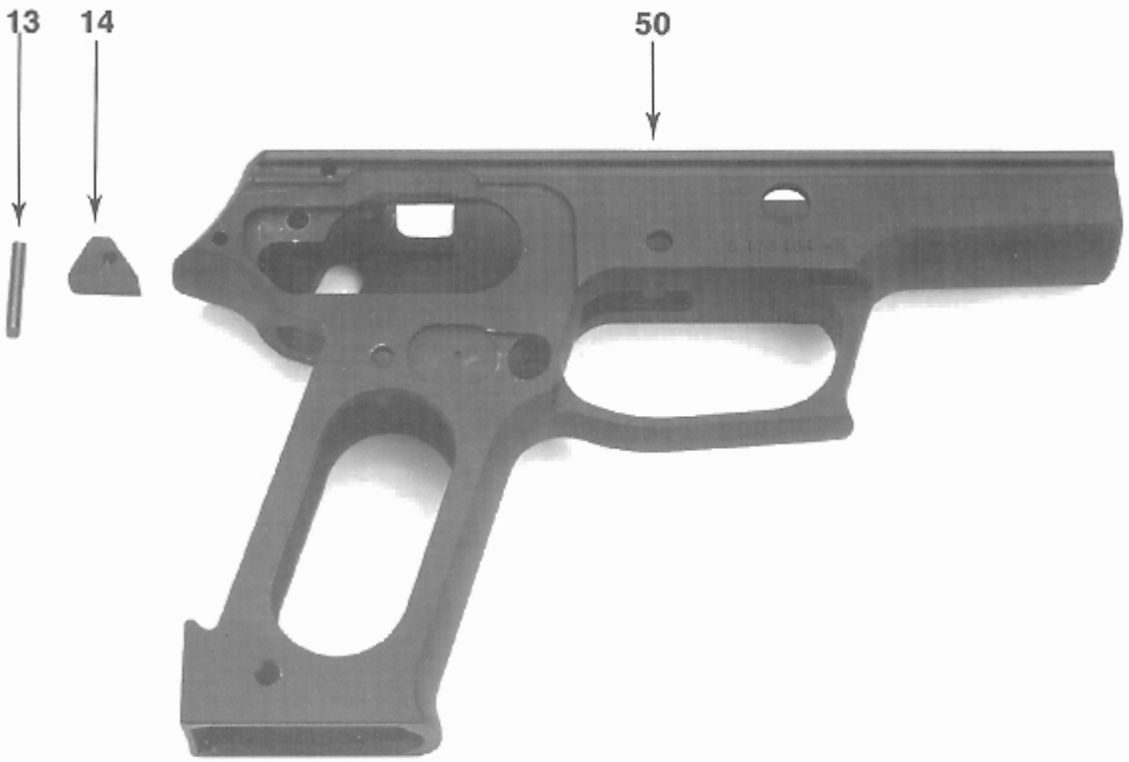
10.5.1 Removal

Sequence of Operations:

1. Push out the hammer stop pin.
2. Remove the hammer stop.

10.5.2 Installation

To install, reverse the sequence used for removal.



Hammer Stop Assembly

13. Hammer stop pin
14. Hammer stop
50. Frame

10.6 Hammer Strut Assembly

10.6.1 Disassembly

Sequence of Operations:

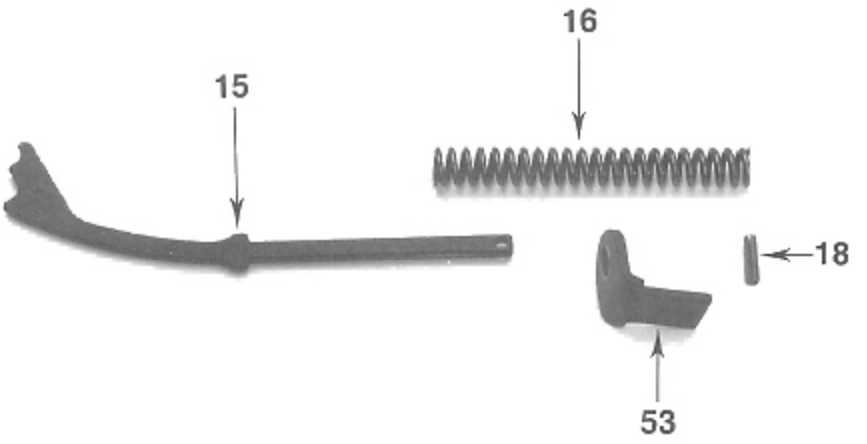
1. Remove the right grip plate and the left grip plate.
2. Lift the main spring seat until it is free from its mounting in the frame.
3. Remove the hammer strut assembly from the frame.
4. Remove the main spring pin from the hammer strut.

NOTE: *When relaxing any tensioned spring, wear adequate eye protection and use caution!*

5. Separate the main spring seat, main spring and hammer strut.

10.6.2 Assembly

For reassembly, reverse the sequence used for disassembly.



Hammer Strut Assembly

15.	Hammer strut	18.	Main spring pin
16.	Main spring	53.	Main spring seat

10.7 Decocking Lever Assembly

10.7.1 Disassembly

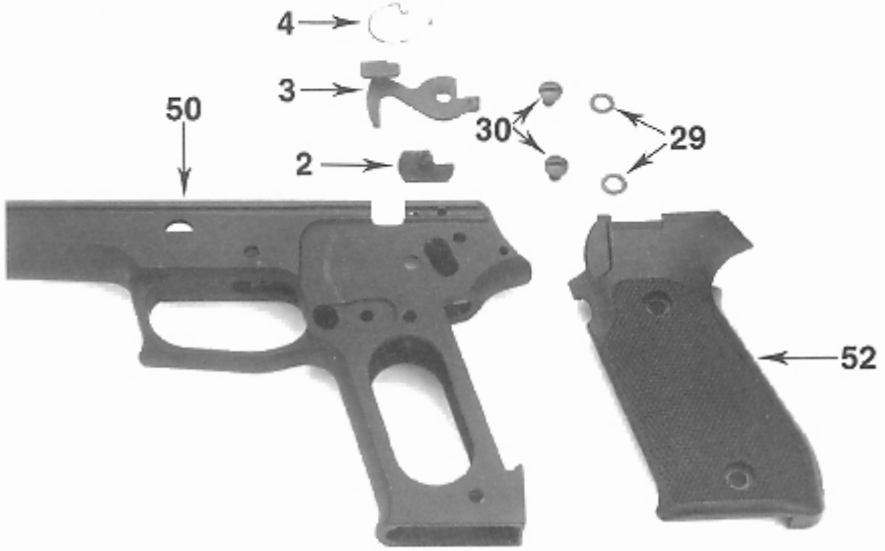
Sequence of Operations:

1. Remove left grip plate. Unhook the decocking lever spring from the rear of the decocking lever and remove.
2. Lift off the decocking lever.
3. Press the decocking lever bearing from the frame into the magazine well and remove it.

10.7.2 Assembly

Sequence of Operations:

1. Place the decocking lever bearing into the frame.
2. Mount the decocking lever into position on the decocking lever bearing.
3. Install the decocking lever spring on the decocking lever bearing and tension the spring by hooking it into the hole at the rear of the decocking lever. Install left grip plate.



Decocking Lever Assembly

2. Decocking lever bearing
3. Decocking lever
4. Decocking lever spring
29. Grip Plate Washers
30. Grip plate screws
50. Frame
52. Left grip plate

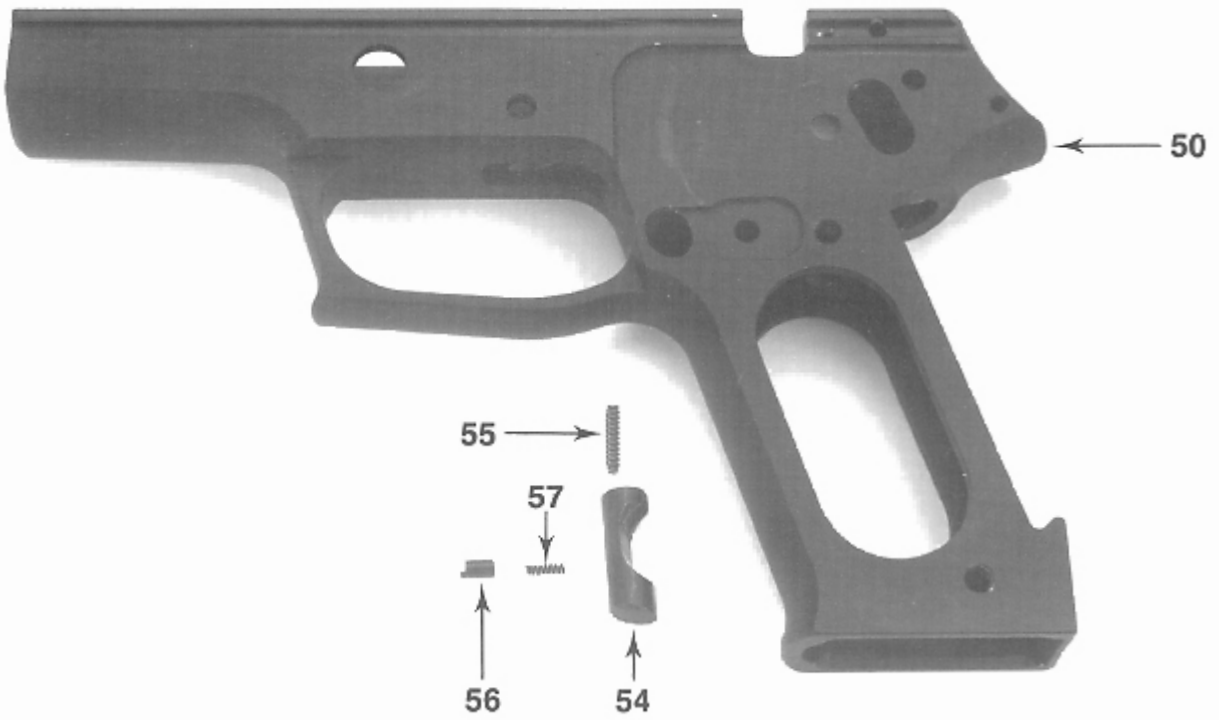
11.1 Disassembly

Sequence of Operations:

1. Remove the left grip plate.
2. Press the magazine catch stop inwards, to release the magazine catch from the frame.
3. Remove the magazine catch stop and magazine catch stop spring from the magazine catch.
4. Remove the magazine catch and magazine catch spring from the frame.

11.2 Assembly

For reassembly, reverse the sequence used for removal and disassembly.

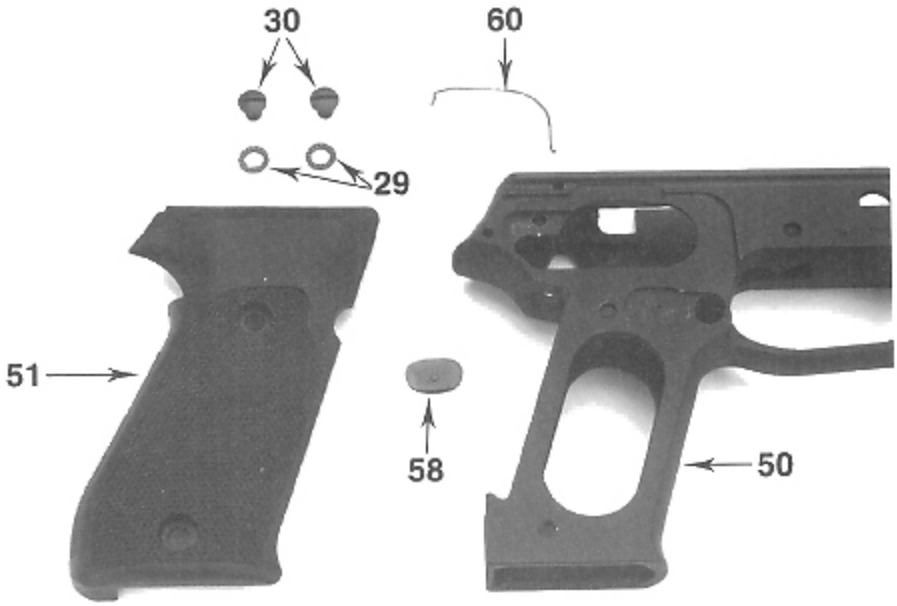


Magazine Catch Assembly

54.	Magazine catch	56.	Magazine catch stop
55.	Magazine catch spring	57.	Magazine catch stop spring

11.3 Reversing the Magazine Catch

1. Remove the right grip plate and left grip plate.
2. Remove the magazine catch.
3. Remove the trigger bar spring.
4. Remove the support plate and reinstall it on the opposite side of the frame.
5. Install the magazine catch and magazine catch spring.
6. Install the magazine catch stop and magazine catch stop spring.
7. Install the trigger bar spring.
8. Install the right grip plate and left grip plate.

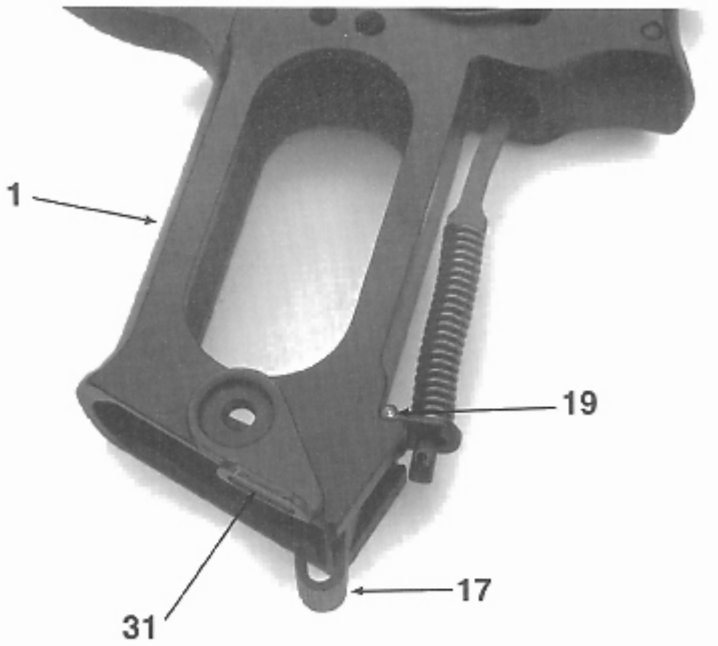


Removing the Support Plate

29.	Grip plate washers	51.	Right grip plate
30.	Grip plate screws	58.	Support plate
50.	Frame	60.	Trigger bar spring

11.4 Magazine Catch Assembly for European Model P220

The magazine catch on the European model P220 is an extension of the mainspring seat which pivots on the magazine catch pin as it sits in the frame mounting. The magazine is retained in the magazine well by upward pressure placed on its floor plate by the magazine catch. The magazine is removed from the magazine well by moving the magazine catch rearward, allowing the magazine to fall free of the frame. The magazine catch assembly may be disassembled in detail similarly to the hammer strut assembly.



European Model P220 Magazine Catch Assembly

1.	Frame	19.	Magazine catch pin
17.	Magazine catch	31.	Strap ring

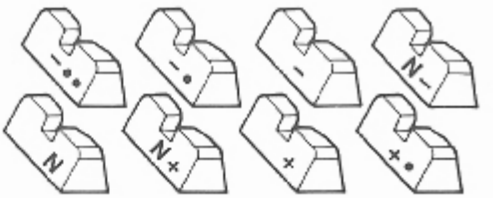
12.1 Zeroing the P220 Pistol

General Note - No windage or elevation correction should be made until the shooter has become familiar with the firing characteristics of the weapon.

When zeroing, the target should be at 25 yards and the pistol should be fired from a rested position using the single-action mode. Sighting should be "point of aim, point of impact."

1. Windage - A change in windage is accomplished by moving the rear sight either to the left or right in its dovetail. When doing this, follow the rear sight rule: Move the rear sight in the direction the group is to go. Moving the rear sight 0.020" in the dovetail alters the point of impact by approximately 3" at 25 yards.

2. Elevation - There are eight different rear sights available to adjust the elevation of the bullet on the target for fixed front sight Model P220s. The sights are coded according to their height. A change in elevation is accomplished by changing the rear sight.



Rear Sight

(2" between number changes at 25 yards)

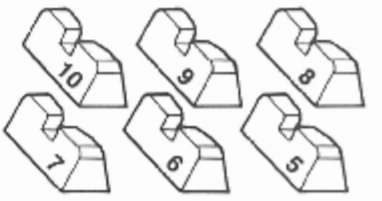
1. When changing the sights, refer to the accompanying sight chart to choose the correct one to accomplish the desired result.

2. The size difference between each coded rear sight is 0.011" and will move the strike of the bullet on the target approximately 2" at 25 yards.

NOTE: *SIG Sauer P220 pistols that have dovetailed interchangeable front sights should be treated similarly to the P226 when attempting sight changes.*

Front Sight

[1" between number changes at 25 yards]



Rear Sight

[2" between number changes at 25 yards]

12.2 Sight Specifications

P220 Fixed front sight	P220 Adjustable front sight		P225		P226		P228		P230
REAR SIGHT	REAR	FRONT	REAR	FRONT	REAR	FRONT	REAR	FRONT	REAR SIGHT
SIGHTS TO RAISE THE STRIKE OF THE BULLET									
— • •	10	9	10	9	10	9	10	9	— •
— •	9	8	9		9		9		—
—		7	8						
N —									
STANDARD SIGHTS									
N	8	6	7	8	8	8	8	8	N
N+									
SIGHTS TO LOWER THE STRIKE OF THE BULLET									
+	7	5	6	7	7	7	7	7	+
+ •	6		5	6	6	6	6	6	+ •
	5			5	5	5	5	5	

NOTE:

1. P220 & P226 dovetailed front sights are the same.
2. At 25 yards each rear sight change will move the strike of the bullet approximately 2", and each front sight change approximately 1" on the P220, P225, P226, P228 and P229. On the P230, each rear sight increment will move the strike of the bullet approximately 2.5" at 25 yards.
3. All sight adjustments should be made on the rear sight first.
4. When zeroing, the weapon should be rested using single action. Sighting should be point of aim, point of impact.
5. Sight rule: Numbers up, groups up; numbers down, groups down; this is true for both front and rear sights.

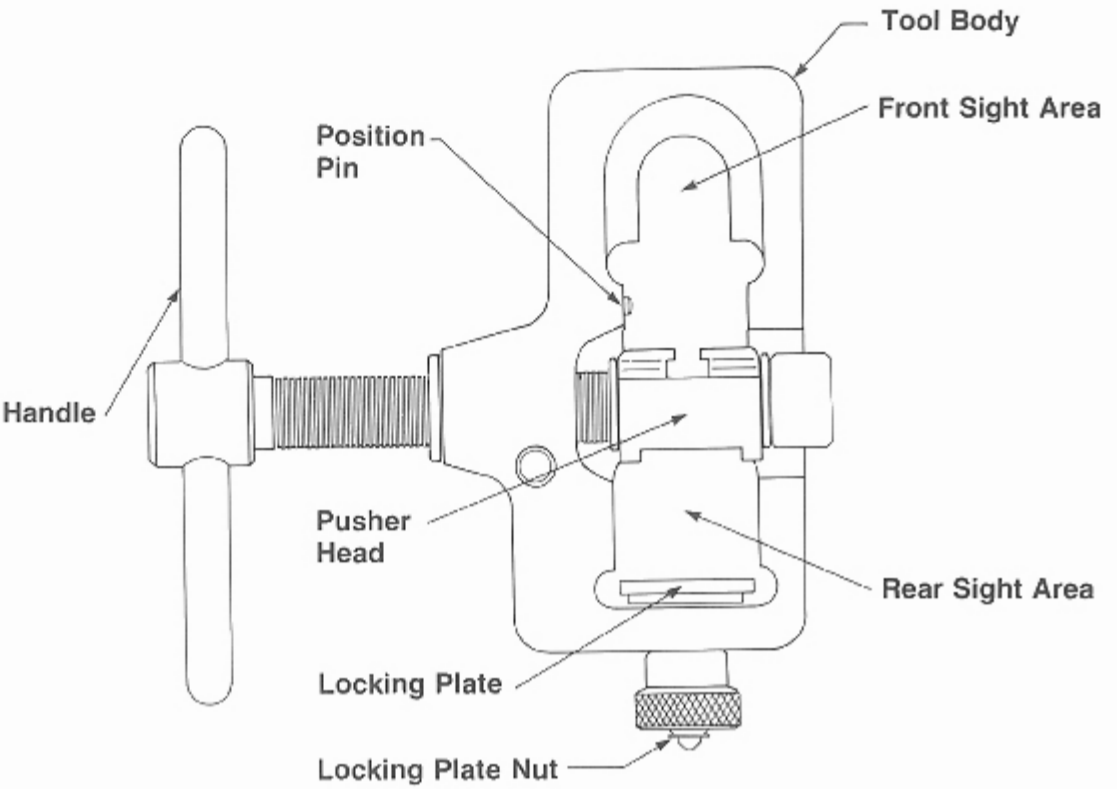
12.3 Using the Combination Sight Pusher

The combination sight pusher is one tool designed to move or change both the front and rear sights on the P220, P225, P226, or P228 pistols. When moving or changing sights, the slide can either remain on the pistol or be removed from it. MAKE SURE THAT THE PISTOL IS UNLOADED BEFORE WORKING WITH IT.

The sight pusher has an open and closed side to ensure correct fit of the gun; insert the front or rear of the slide into the "open side."

Combination Sight Pusher

Open Side Shown



NOTE: *There are several generations of sight pushers in the field. Some may vary somewhat to the example shown.*

12.3 Using The Combination Sight Pusher (cont'd)

12.3.1 Placement of the Pistol in the Sight Pusher

Front Sight: When inserting the front of the slide into the sight pusher, follow these steps: place the end of the slide into the pusher and center the pusher head directly over the base of the front sight. Snug the position pin in the sight pusher against the slide to eliminate movement during the sight adjustment procedure. Turn the handle to move the pusher head into contact with one side of the sight.

NOTE: *The pusher head must be centered over the sight base before making sight adjustments.*

NOTE: *Front sight instructions are applicable only to those guns with dovetailed interchangeable front sights.*

Rear Sight: When inserting the rear of the slide into the pusher, follow these steps: loosen the locking plate, insert the slide rails onto the locking plate, center the rear sight in the pusher head, tighten the locking plate nut.

NOTE: *The nut must be finger tight to hold the slide firmly into the tool.*

12.3.2 Moving the Sights

To move the sight, rotate the pusher's handle until the pusher head is seated against the sight; further turning will move the sight for windage adjustments.

12.3.3 Changing the Sights

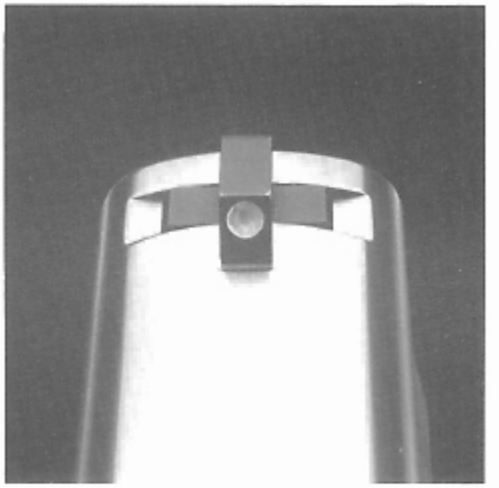
To change the sights, rotate the pusher's handle to push the sight to the outside of the pusher (the opposite side from the handle) and off the slide, remove the slide from the tool and insert the new sight, then put the slide back into the pusher (making sure to lock it in) and push the new sight into place.

NOTE: *Install and remove SIG sights from the left side of the slide, due to a chamfered edge machined on the right corners of the sight bases to aid in the ease of sight installation.*

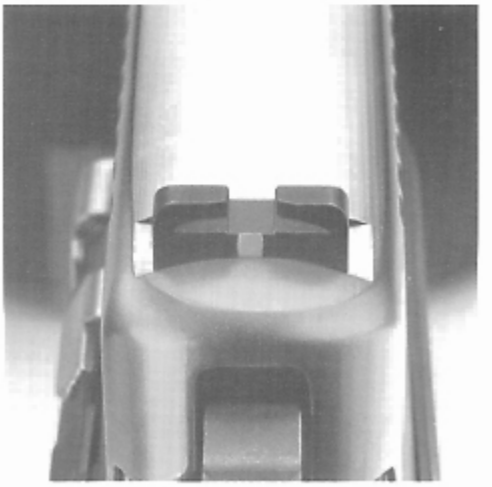
12.3.4 Centering the Sights

When changing sights, you can use a pencil to mark the original location of the sights in the dovetail. After removing the sights to be replaced, push the new sights on the slide and align to the mark.

NOTE: *Rough alignment can be achieved by the following: on guns with the dovetailed interchangeable front sight, center the sight blade on the slide, and on the rear sight, center it in the dovetail.*



Front Sight



Rear Sight

THE PISTOL MUST BE ZEROED - After sights have been moved or changed.

13.1 General

In a well kept and properly maintained weapon, malfunctions or stoppages rarely occur.

13.2 Stoppages, Malfunctions and Their Correction

13.2.1 Feeding

Problem	Cause	Correction
No cartridge fed into chamber	1) Magazine not seated properly	Insert magazine properly
	2) Magazine dirty or deformed	Insert fresh magazine, clean or replace the removed magazine
	3) Weak magazine spring	Replace magazine spring
	4) Corroded, dirty or damaged ammunition	Change ammunition
Cartridge does not chamber	1) Cartridge incorrectly fed	Check or change magazine
	2) Low quality ammunition	Change ammunition
Slide does not close completely	1) Shooter error	Keep wrists locked and maintain a firm grip when firing the pistol
	2) Out of spec or defective ammunition	Replace ammunition
	3) Weapon dirty	Field strip, clean and lubricate
	4) Chamber dirty	Clean the chamber and bore
	5) Recoil spring weak or broken	Replace recoil spring and guide
	6) Recoil spring guide damaged	Replace recoil spring and guide
	7) Weapon too heavily lubricated	Clean and lubricate as per specification

13.2 Stoppages, Malfunctions and Their Correction (cont'd)

13.2.1 Feeding (cont'd)

Problem	Cause	Correction
Slide does not close completely	8) Binding in the slide rails	Check to assure no pins are protruding in the frame rails
Double feed	1) Low quality ammunition	Replace ammunition
	2) Dirty extractor	Clean breech face
	3) Broken extractor	Replace extractor
	4) Damaged magazine	Replace magazine
	5) Shooter error	Keep wrist locked and maintain a firm grip when firing the pistol
	6) Ruptured case in chamber	Clear, clean and inspect the weapon, replace the ammunition

13.2.2 Extraction and Ejection

Problem	Cause	Correction
Slide has sprung forward but spent case sticks in the chamber	1) Underpowered ammunition	Replace ammunition
	2) Too little rearward movement due to dirt	Clean and lubricate the weapon and perform a function check
	3) Damaged or broken extractor	Replace extractor
	4) Ruptured case in chamber	Clear, clean and inspect the weapon, replace the ammunition
Inconsistent ejection to include trapping brass in the ejection port	1) Low quality ammunition	Replace ammunition
	2) Shooter error	Keep wrists locked and maintain a firm grip when firing the pistol

13.2 Stoppages, Malfunctions and Their Correction (cont'd)

13.2.2 Extraction and ejection (cont'd)

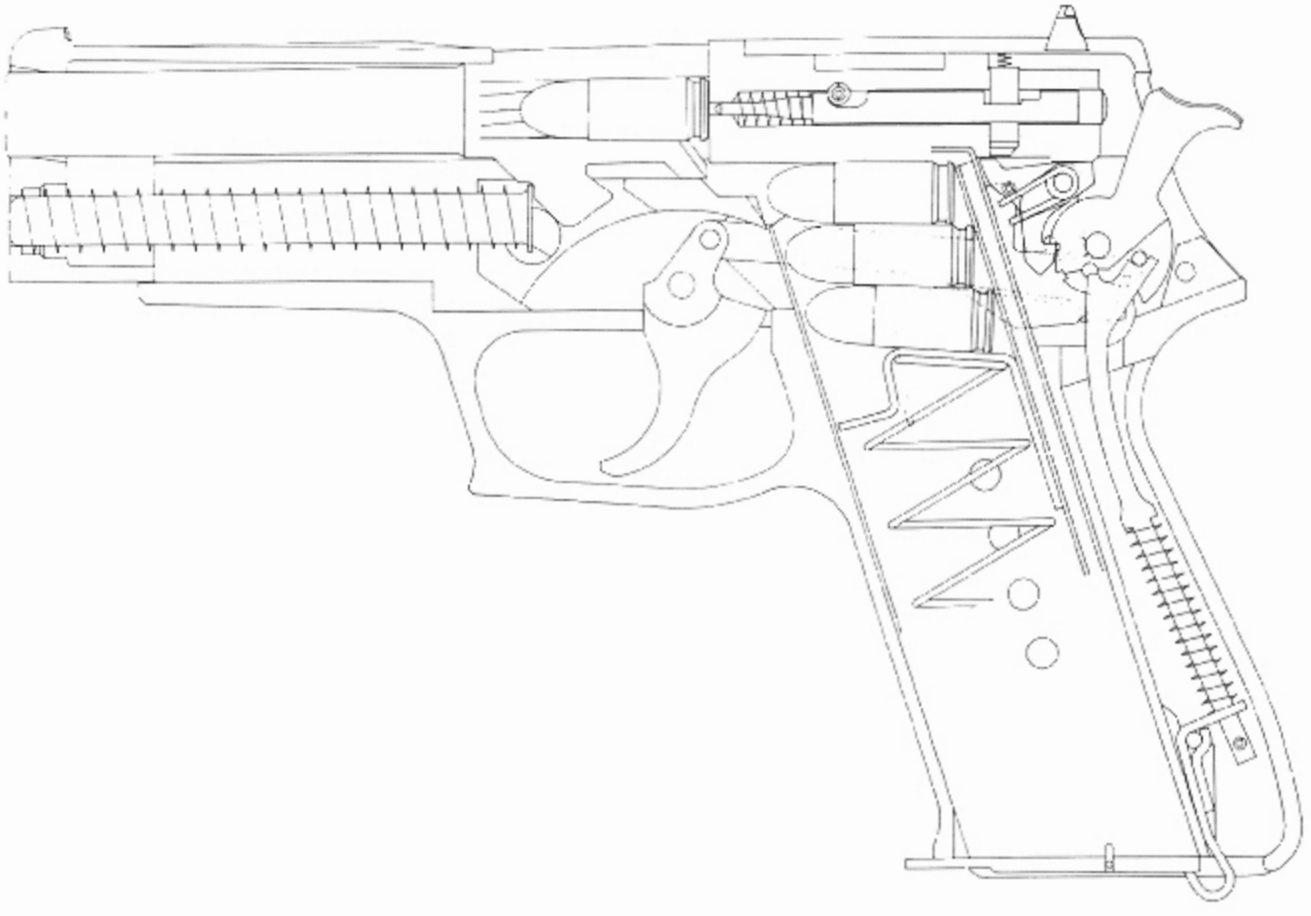
Problem	Cause	Correction
Inconsistent ejection to include trapping brass in the ejection port	3) Extractor damaged	Replace extractor
	4) Ejector damaged	Replace ejector
	5) Dirty gun, insufficient recoil to cycle the action	Clean and lubricate the weapon
13.2.3 Other		
After being pulled, the trigger remains in the rearward position and is no longer under pressure	1) Trigger bar spring broken or incorrectly installed	Replace the trigger bar spring
The cocked hammer cannot be released by the trigger	1) Trigger bar spring broken or positioned improperly on trigger bar	Check trigger bar spring position or replace trigger bar spring
	2) Damaged sear	Replace sear and hammer
	3) Damaged safety lever	Replace safety lever
	4) Damaged trigger bar	Replace trigger bar
Slide is arrested before the last round is fired	1) Slide catch spring weak or broken	Replace the slide catch spring
	2) Shooter error	Improper grip, thumb operating slide catch lever during recoil of pistol
	3) Dirty Weapon	Clean and lubricate the weapon

13.2 Stoppages, Malfunctions and Their Correction (cont'd)

13.2.3 Other (cont'd)

Problem	Cause	Correction
Slide is not arrested after the last round is fired	1) Shooter error	Check grip position; keep wrists locked
	2) Under powered ammunition	Replace ammunition
	3) Improperly lubricated	Lubricate weapon
	4) Magazine follower jammed in upper part of the magazine	Clean or replace the magazine
	5) Slide catch lever is broken	Replace the slide catch lever
	6) Slide arresting notch damaged	Return to factory for repair
Decocking lever does not spring back	1) Decocking lever spring is out of position or broken	Replace or correctly mount the decocking lever spring
Hammer does not stay cocked when the slide is pulled to the rear and released	1) Arm of the sear spring is not secured under the sear spring pin H.D. or broken	Install the sear spring correctly or replace it
	2) Hammer or sear broken	Replace the hammer AND the sear

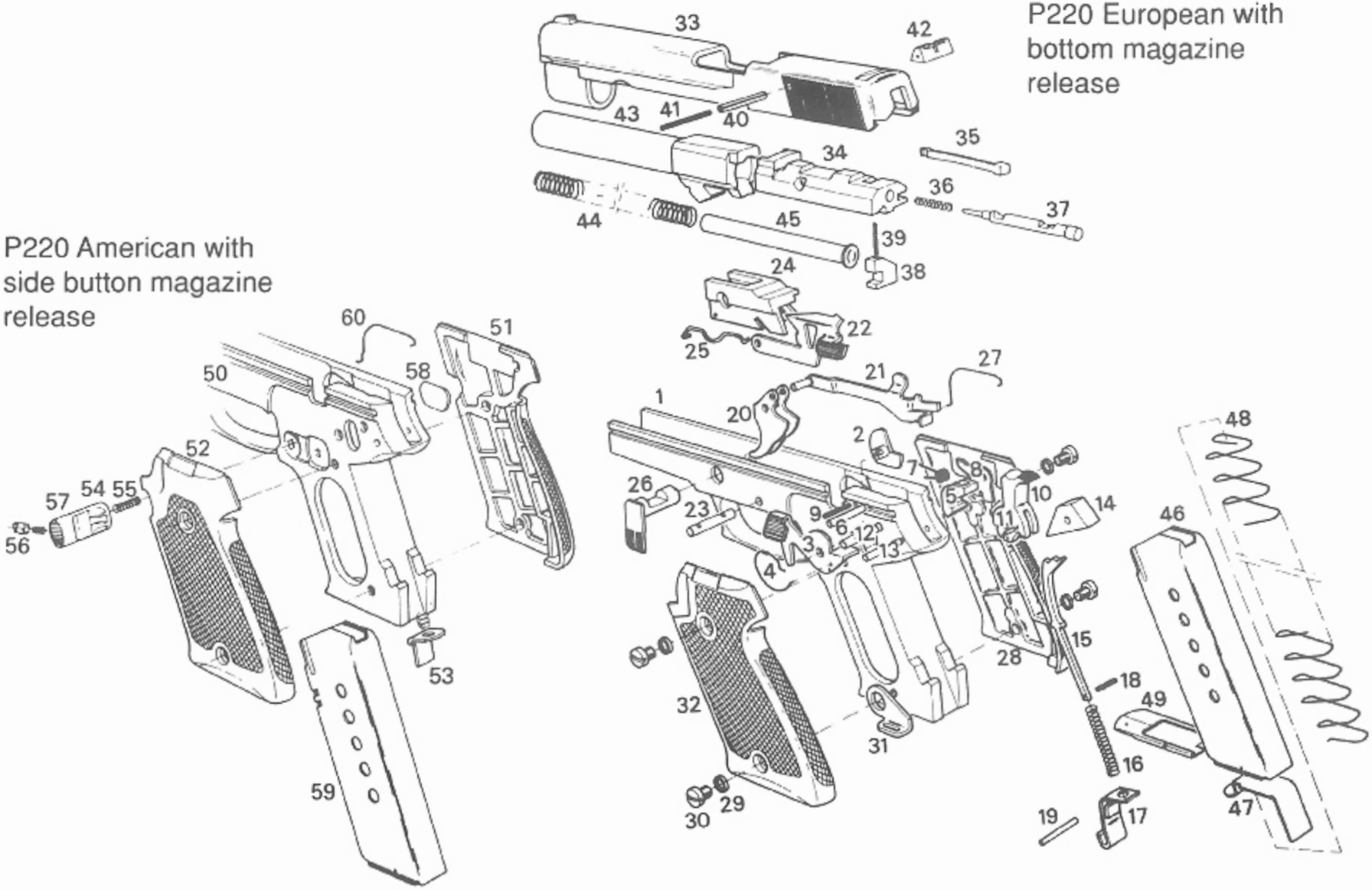
14.0 PROFILE DRAWING AND PARTS DIAGRAM



Profile Drawing of P220 Combat Pistol

P220 European with bottom magazine release

P220 American with side button magazine release



14.0 PROFILE DRAWING AND PARTS DIAGRAM

Parts inclusive to the SIG-Sauer P220 American and P220 European

#	Designation	#	Designation	#	Designation
2.	Decocking lever bearing	16.	Mainspring	36.	Firing pin spring
3.	Decocking lever	18.	Mainspring pin	37.	Firing pin
4.	Decocking lever spring	20.	Trigger	38.	Safety lock
5.	Sear	21.	Trigger bar	39.	Safety lock spring
6.	Sear pivot pin	22.	Slide catch lever	40.	Outer pin H.D.
7.	Sear spring	23.	Trigger pivot pin	41.	Inner pin H.D.
8.	Safety lever	24.	Locking insert	42.	Rear sight
9.	Sear spring pin H.D.	25.	Slide catch lever spring	43.	Barrel
10.	Hammer	26.	Take-down lever	44.	Recoil spring
11.	Hammer strut pin	29.	Washer	45.	Recoil spring guide
12.	Hammer pivot pin	30.	Grip plate screw	47.	Magazine follower
13.	Hammer stop pin	33.	Slide	48.	Magazine spring
14.	Hammer stop	34.	Breechblock	49.	Magazine floorplate
15.	Hammer strut	35.	Extractor		

Parts exclusive to the Model P220 American version.

50.	Frame	54.	Magazine catch	58.	Support plate
51.	Right grip plate	55.	Magazine catch spring	59.	Magazine tube
52.	Left grip plate	56.	Magazine catch stop	60.	Trigger bar spring
53.	Main spring seat	57.	Magazine catch stop spring		

Parts exclusive to the Model P220 European version.

1.	Frame, European	27.	Trigger bar spring, European	32.	Left grip plate, European
17.	Magazine catch, European	28.	Right grip plate, European	46.	Magazine tube, European
19.	Magazine catch pin, European	31.	Strapring, European		

15.1 Tools Necessary for Weapon Disassembly

(1) Straight Blade Screwdriver suitable for grip plate screw removal

(1) 1/8" Straight Blade Screwdriver

(1) 1/8" Roll Pin Punch

(1) 1/16" Pin Punch

(1) 4 - 8 oz. Hammer

For further assistance after consulting the manual, contact:

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NOTES